Common Elements in GHG Reporting

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Purpose of GHG Accounting Programs?



- Understand corporate footprint
- Public disclosure of GHG footprint/liability
- Advance GHG accounting standards / build organizational expertise
- Establish pre-regulatory baseline
- Prepare for emissions trading

... Standards have evolved along the lines of financial accounting principles

Representative GHG Reporting Programs



- National government
 - U.S. EPA Climate Leaders
 - U.S. DOE 1605(b)
- State-level programs
 - RGGI
 - California Climate Action Registry
 - Connecticut
- NGO/Private programs
 - WRI/WBCSD GHG Protocol
 - Eastern Climate Registry
 - Chicago Climate Exchange

1. Define the Reporting Entity



- Geographic boundaries
 - State / Region / Country / World
- Operational boundaries
 - Management control
 - Financial control
 - Equity share
- Level of detail
 - Source / Unit / Facility / Entity

2. Specify Entity's Activities



Direct Emissions

- Mobile
- Stationary
- Process
- Fugitive

Indirect Emissions

- Energy purchased and consumed
 - Electricity
 - Steam
 - Heating
 - Cooling

3. Determine Scope



GHGs

- CO₂ only
- CO₂ and phase-in other GHGs
- 6 GHGs from start

Time

- Calendar Year (January December)
- Base Year
 - 1990 and onward
- Baseline
 - Annual
 - 3-year average

4. Determining GHG Emissions



- Direct Measurement
 - Continuous Emissions Monitors

Calculations

Energy Input x Emission Factor x $GWP = CO_2$ equiv.

- •Fuel meter
- Purchase records

- •US DOE/EPA
- •IPCC
- Other

IPCC:

- •SAR (1996)
- •TAR (2001)

De minimis



- Purpose: alleviate administrative burden of accounting for a relatively insignificant amount of emissions
- Estimate, but not calculate emissions below threshold
- Setting the threshold
 - 3% or 5% of total emissions
 - Absolute threshold, e.g. 10,000 mt CO₂e
 - Assessed at facility or entity

Other Required Information



- Carbon intensity metrics
 - lbs CO₂/widget manufactured
- Emissions from product use
 - e.g., delivered electricity
- Emission reduction goals

Comparing Programs



Common Requirements

- Calendar year
- Goal is 6 GHGs
- Track direct emissions separate from indirect emissions
- Facility-level reporting
- Public reporting of at least entity emissions
- Some de minimis threshold

Varying Requirements

- Geographic scope
- Control vs. equity share
- Base year
- Other required information

One Example: CA Climate Action Registry



Reporting Requirements:

- California, national or international reporting
- Control or equity share
- Entity-level information is publicly available at www.climateregistry.org
- Direct stationary, mobile, process and fugitive emissions
- Indirect emissions from electricity, steam purchases
- January December annual reporting
- CO_2 first 3 years, then all 6 Kyoto gases (CO_2 , CH_4 , N_2O , HFCs, PFCs, SF_6)
- Electric power sector must also report metrics, and other information

Questions about the California Climate Action Registry?



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